

The present invention relates to multivalent recombinant raccoon poxviruses, containing more than one exogenous gene inserted into either the thymidine kinase gene, the hemagglutinin gene, or a combination thereof. Disclosed is the use of the multivalent recombinant raccoon poxviruses as vaccines to immunize felines against subsequent challenge by feline pathogens. Also disclosed is a method of making a multivalent recombinant raccoon poxvirus by a recombination process involving the construction of an insertion vector into which the exogenous genes are inserted, and flanking the inserted genes are sequences which can recombine into the raccoon poxvirus thymidine kinase gene, or the hemagglutinin gene, or a combination thereof; introducing both the insertion vector containing the exogenous genes, and raccoon poxvirus into susceptible host cells; and selecting the recombinant raccoon poxvirus from the resultant plaques.